WHAT IS CLAIMED IS:

1. An image processing apparatus, comprising:

a first converter that subjects an image data to a first conversion to thereby generate a first image data;

a second converter that subjects the first image data to a second conversion to thereby generate a second image data;

an arithmetic unit that conducts an arithmetic operation on the image data and the second image data to thereby generate a third image data;

a compressor that compresses the third image data to thereby generate a compressed image data; and

an embedding unit that embeds the compressed image data in the first image data.

2. The image processing apparatus according to claim 1, wherein the first conversion includes widening a spatial quantization width, and the second conversion includes narrowing the spatial quantization width.

3. The image processing apparatus according to claim 1, wherein the first conversion includes widening a color spatial quantization width, and the second conversion includes narrowing the color spatial quantization width.

4. The image processing apparatus according to claim 1, wherein the first conversion includes widening a time quantization width, and the second conversion includes narrowing the time quantization width.

5. The image processing apparatus according to claim 1, wherein the embedding unit embeds the compressed image data in the image data using electronic watermark technology.

6. The image processing apparatus according to claim 1, further comprising an outputting unit that outputs, as an image file in a predetermined format, the first image data in which the embedding unit has embedded the compressed image data.

7. The image processing apparatus according to claim 1, wherein the arithmetic operation includes subtracting the second image data from the image data.

8. An image processing apparatus, comprising:

a converter that subjects an image data to a predetermined conversion to thereby generate a converted image data;

an extractor that extracts embedded data, from the image data, that is data embedded in the image data;

a decompressor that decompresses the embedded data extracted to thereby generate a compressed embedded data; and

an arithmetic unit that conducts an arithmetic operation on the

converted image data the compressed embedded data.

9. The image processing apparatus according to claim 8, wherein the extractor extracts embedded data from the image data using electronic watermark technology.

10. The image processing apparatus according to claim 8, further comprising a receiving unit that receives the image data as an image file in a predetermined format.

11. The image processing apparatus according to claim 8, further comprising:

a embedding determiner that determines whether embedded data has been embedded in the image data; and

a selector that receives the converted image data, the compressed embedded data, and result of determination from the embedding determiner, outputs the converted image data when the result of determination indicates that embedded data has been embedded in the image data and outputs the compressed embedded data when the result of determination indicates that embedded data has not been embedded in the image data.

12. The image processing apparatus according to claim 8, wherein the arithmetic operation includes adding the converted image data and the compressed embedded data.

13. A method of processing image data, the method being carried out by an image processing apparatus that transmits the image data processed to other apparatus, comprising:

generating an image data;

subjecting the image data to a first conversion to thereby generate a first image data;

subjecting the first image data to a second conversion to thereby generate a second image data;

conducting an arithmetic operation on the image data and the second image data to thereby generate a third image data;

compressing the third image data to thereby generate a compressed image data; and

embedding the compressed image data in the first image data.

14. A method of processing image data, the method being carried out by an image processing apparatus that receives the image data from other apparatus, comprising:

subjecting the image data received to a predetermined conversion to thereby generate a converted image data;

extracting embedded data, from the image data, that is data embedded in the image data;

decompressing the embedded data extracted to thereby generate a compressed embedded data;

conducting an arithmetic operation on the converted image data the compressed embedded data to thereby generate an arithmetic data;

and

visualizing the arithmetic data.

15. A computer-readable recording medium that records a computer program that makes a computer process an image data and transmit the image data processed to other apparatus, the computer program making the computer execute:

generating an image data;

subjecting the image data to a first conversion to thereby generate a first image data;

subjecting the first image data to a second conversion to thereby generate a second image data;

conducting an arithmetic operation on the image data and the second image data to thereby generate a third image data;

compressing the third image data to thereby generate a compressed image data; and

embedding the compressed image data in the first image data.

16. A computer-readable recording medium that records a computer program that makes a computer receive an image data from other apparatus and process the image data, the computer program making the computer execute:

subjecting the image data received to a predetermined conversion to thereby generate a converted image data;

extracting embedded data, from the image data, that is data

embedded in the image data;

decompressing the embedded data extracted to thereby generate a compressed embedded data;

conducting an arithmetic operation on the converted image data the compressed embedded data to thereby generate an arithmetic data; and

visualizing the arithmetic data.